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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _**3**_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Detailed Action

Claims 1-15 have been examined.

Claims 1-15 have been rejected.

Abstract

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Response to Arguments

Applicant's arguments regarding claims 1-10 are moot in view of the new grounds of rejection.

Claim Objections

Claim 1 line 8 states "at least one set of statistics, and in particular a set of fault statistics." In view of the arguments, the examiner is assuming the limitation is "fault statistics". This use of the "in particular" leaves the claim somewhat indefinite.

Claim 5 lines 1-2 state "a base chip, and particularly a system base chip" and is objected to for the same reason as claim 1, above.

Claim 9 line 1 states "a system, and particularly a control system" and is objected to for

the same reason as claim 1, above.

Claim 12 is improperly dependent on itself. In view of the Applicant's remarks regarding

claim 12 in the arguments, the examiner is assuming claim 12 is instead dependent on

claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 5-10, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Koch (US Patent 5,367,665).

As per claim 1, Koch ('665) discloses a method of monitoring the operation of at least

one microcontroller unit that is intended for at least one application and is associated

with a system (column 4 lines 8-13) wherein

the microcontroller unit has at least one non-volatile memory area associated

with it (column 3 line 61 through column 4 line 5),

the memory area can be read from and written to by the microcontroller unit

(column 4 lines 13-14), and

at least one set of statistics, and in particular a set of fault statistics, relating to

the operation of the microcontroller unit, can be kept by means of the memory area

(column 4 lines 13-14, reset counter is incremented on each error).

Koch ('665) does not explicitly disclose that the memory is non-volatile.

At the time of invention it would have been obvious to a person of ordinary skill in the art

to modify the system disclosed by Koch ('665) such that the memory area is non-volatile

memory. This modification would have been obvious because Koch ('665) discloses a

system for use in a vehicle (column 3 lines 10-13), vehicles are periodically shut down

and even when running produce a finite current from the engine. Non-volatile memory

does not require voltage to maintain data and would thus preserve the vehicle's battery

power.

As per claim 2, Koch ('665) discloses a method as claimed in claim 1, wherein the

memory area is permanently supplied by at least one battery (column 3 lines 39-43 and

column 3 lines 10-19, the system is used for a motor vehicle wherein turning the key

connects battery power).

As per claim 3, Koch ('665) discloses a method as claimed in claim 1 or 2, wherein

in relation to the operation of the microcontroller unit a distinction can be made

between different reset events (column 4 lines 67-column 5 line 6); and

these different reset events can be made accessible to the microcontroller unit

(column 3 lines 59-61 and column 4 lines 8-13).

As per claim 5, this claim recites limitations found in claim 1 and is rejected on the same

grounds as claim 1.

As per claim 6, Koch ('665) discloses a base chip as claimed in claim 5, including

at least one information unit that is provided to allow for different reset events

(column 4 lines 13-14, the reset counter),

at least one reset unit for resetting the microcontroller unit, which reset unit is

connected to the microcontroller unit (column 4 lines 11-13, one processor resets the

other), and

at least one supply unit that is connected to the microcontroller unit (column 3

lines 39-43, in a vehicle, turning the key connects the battery to the system).

As per claim 7, Koch ('665) discloses a base chip as claimed in claim 6, wherein

the memory area and the supply unit are permanently associated with at least

one battery unit (column 1 lines 6-8, vehicles have batteries, typically of 12 volts, which

would require a supply circuit to step the voltage down to the 5 or 3.3 used for computer

systems); and

the microcontroller unit has at least one temporary energy supply associated with

it via the supply unit (column 3 lines 39-43 and column 3 lines 54-61).

As per claim 8, Koch ('665) discloses a base chip as claimed in any of claims 6 to 7,

wherein the memory area and the information uncut have inserted in front of them at

least one interface unit for the exchange of data with the microcontroller unit (column 3

lines 61-66 and column 4 lines 13-14, the processor interfaces with the reset counter

and the memory).

As per claim 9, Koch ('665) discloses a system, and particularly a control system,

including at least one microcontroller unit intended for at least one application and at

least one base chip as claimed in any of claims 5 to 7 (column 1 lines 6-8).

As per claim 10, Koch ('665) discloses use of a method as claimed in claim 1 or of at

least one base chip as claimed in claim 5 for monitoring the operation of at least one

microcontroller unit intended for at least one application in automobile electronics

(column 1 lines 6-8, column 1 lines 65-67, and column 3 line 64 through column 4 line

7).

As per claim 12, Koch ('665) discloses the method of claim 1, further comprising:

comparing a number of at least one type of reset event to a threshold; and

when the number of the at least one type of reset event is greater than the

threshold, operating the microcontroller unit in a low-energy mode (column 1 lines 60-

64).

As per claim 15, this claim recites limitations recited in claim 12 and is rejected on the

same grounds as claim 12.

Claim 4 is rejected under 35 U.S.C. 103(a) being unpatentable over Koch ('665) in view

of Jablon ('006).

Koch ('665) discloses the method as claimed in any of claims 1 to 2, wherein the

memory area can be read from at any time (column 2 lines 60-62). Koch ('665)

additionally discloses the use of cold-resets and warm-resets and the discrimination

between the two (column 3 lines 61-64 and column 4 lines 21-23). Koch ('665) does not

expressly disclose the method wherein the memory area can be written to only after a

reset or while the system is restarting.

Jablon ('006) teaches a special write protected memory that is only writable after being

reset into write-enable mode (see abstract).

At the time of invention it would have been obvious to a person of ordinary skill in the art

to modify the monitor system disclosed by Koch ('665) such that it employs write

protected memory that is only writable after being reset, as taught by Jablon ('006). This modification would have been obvious because this write protection mechanism is immune to malicious software attempts to enable memory-writing (see abstract, about 2/3's of the way down).

Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koch ('665) in view of Anderson (US Patent 6,263,453).

As per claim 11, Koch ('665) discloses the method of claim 1. Koch ('665) also discloses the counting of warm reset events (column 4 lines 21-29). Koch ('665) does not expressly disclose the counting of different types of reset events.

Anderson ('453) teaches counting of power failure events (column 2 lines 6-25).

At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the system disclosed by Koch ('665) such that it counts power failure events in addition to warm resets. This modification would have been obvious because it allows the system to preserve data that may have been corrupted if a power failure occurred while data was being accessed (Anderson ('453) column 1 lines 60-63 and column 2 lines 50-63).

As per claim 14, this claim recites limitations found in claim 11 and is rejected on the same grounds as claim 11.

Claim 13 is rejected under 35 U.S.C. 103(a) being unpatentable over Koch ('665) in view of Wikipedia's Random Access Memory.

Koch ('665) discloses the base chip of claim 5. Koch ('665) does disclose the system wherein the memory is a random access memory.

Wikipedia's Random Access Memory teaches basic information about random access memory.

At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the monitor system disclosed by Koch ('665) such that the memory employed (column 3 lines 64-65) is a random access memory. This modification would have been obvious because random access memory allows for any part of the memory to be directly addressed (Wikipedia's Random Access Memory, first paragraph).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Specifically, Buer ('496) teaches a system using monitor modules

to monitor for errors and wherein resets are counted and an alarm sounded if the count

is too high; Hwang ('634) teaches a system wherein repeated resets or a special reset

key can be used to cause the system to enter a debug mode; and Wu ('794) teaches a

system wherein power supply faults cause rests and after a threshold number of resets

execution is disabled.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Schell whose telephone number is (571) 272-8186. The examiner can normally be reached on Monday through Friday 9AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS

SCOTT BADERMAN
SUPERVISORY PATENT EXAMINER